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(54) Title: INSTRUMENTATION, ARTICLES OF MANUFACTURE, AND ANALYSIS METHODS

(57) **Abstract:** Analysis methods are provided that include generating a sample data set using a sample, the sample data set comprising first and second data sets, wherein each of the first and second data sets comprises at least one of an analytical parameter and a sample characteristic acquired using the analytical parameter; and using the first and the second data sets, identifying the sample. Instruments including an ionization source configured to apply different ionization energies to a sample to provide different sample characteristics, and processing circuitry configured to process the different sample characteristics to identify the sample are provided.

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